



## Indiana Imagery Program Pricing

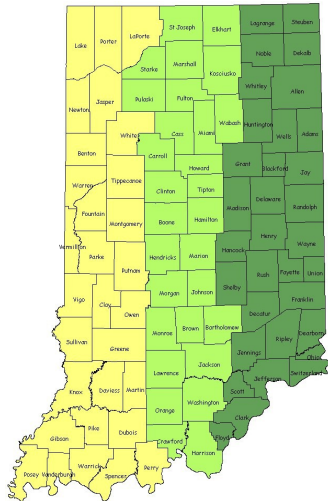
- A buy-up option will be offered to any Indiana county or city once within the 3-year imagery cycle
- Product costs include quality review and distribution.
- The maximum cost advantage will be received for standard buy-ups occurring within the program cycle (see map below).
- An increased “out of cycle” fee is assessed when a buy-up occurs outside the program cycle to cover the increased cost of mobilization for aircraft and ground control activities.
- Contracting for additional annual buy-ups beyond those listed below, may be negotiated directly with Woolpert, Inc.

## Project Costs

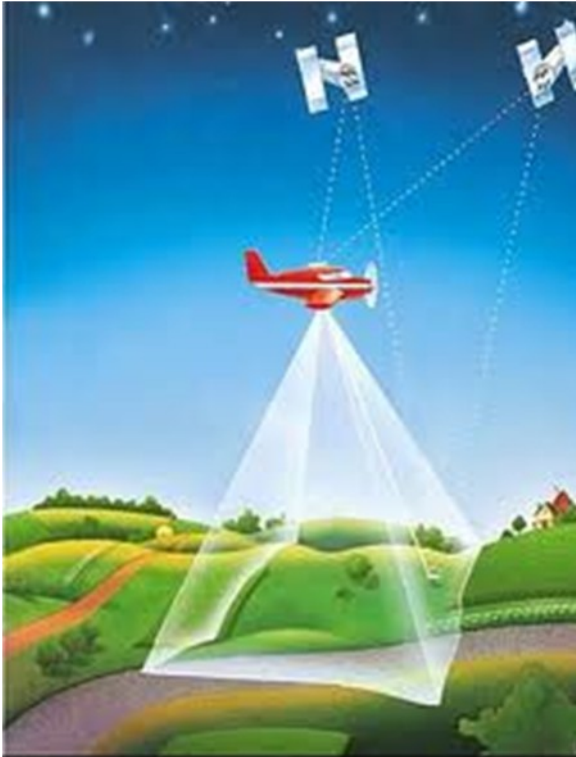
**Total Base Product Lump Sum Fee.....\$4,616,252.00 USD**

The project will be divided into three project areas. The center column of the state will be performed in 2011. The eastern and western columns will be performed in 2012 and 2013. The order of the eastern and western columns will be determined by county needs. Buy-ups will impact the final configuration of each of the three columns.

The new 4-band orthoimagery will encompass the entire land area of the State of Indiana, or +/- 36,418 square miles. The tile border will be 1,000 feet beyond the state boundary with the following exceptions. The tile border with the State of Illinois along the Wabash River, and the State of Kentucky along the Ohio River shall be buffered a minimum distance of 1,000 feet or to the opposite river bank, whichever distance is greater. The imagery shall fill all tiles. Border areas of the State proximate to Lake Michigan (Lake, Porter and LaPorte Counties) shall be buffered beyond the shoreline a minimum distance of 2,500 feet. In addition to these dimensions, data coverage shall extend to the geographic extents of the delivery tile grid.



For the LiDAR effort, the project area will contain both existing LiDAR data and new LiDAR data to be collected by Woolpert beginning in 2011. The boundary limits for the new LiDAR data will be the same as the orthoimagery and cover +/- 29,218 sq. miles. However, unlike the orthoimagery, full tiles will not be delivered. The new LiDAR data will only be delivered to the 1000-foot buffer or to the opposite river bank which-ever is greater.



### Center Tier

Project Planning

1-Foot Orthoimagery – 12,133 sq. mi.

USGS LiDAR – 10,179 sq. mi.

Existing and New Hydro-Flattening – 12,133 sq. mi.

**Total ..... \$1,523,165**

### East Tier

Project Planning

1-Foot Orthoimagery – 11,796 sq. mi.

USGS LiDAR – 9,120 sq. mi.

Existing and New Hydro-Flattening – 11,796 sq. mi.

**Total ..... \$1,437,672**

### West Tier

Project Planning

1-Foot Orthoimagery – 13,233 sq. mi.

USGS LiDAR – 11,229 sq. mi.

Existing and New Hydro-Flattening – 13,233 sq. mi.

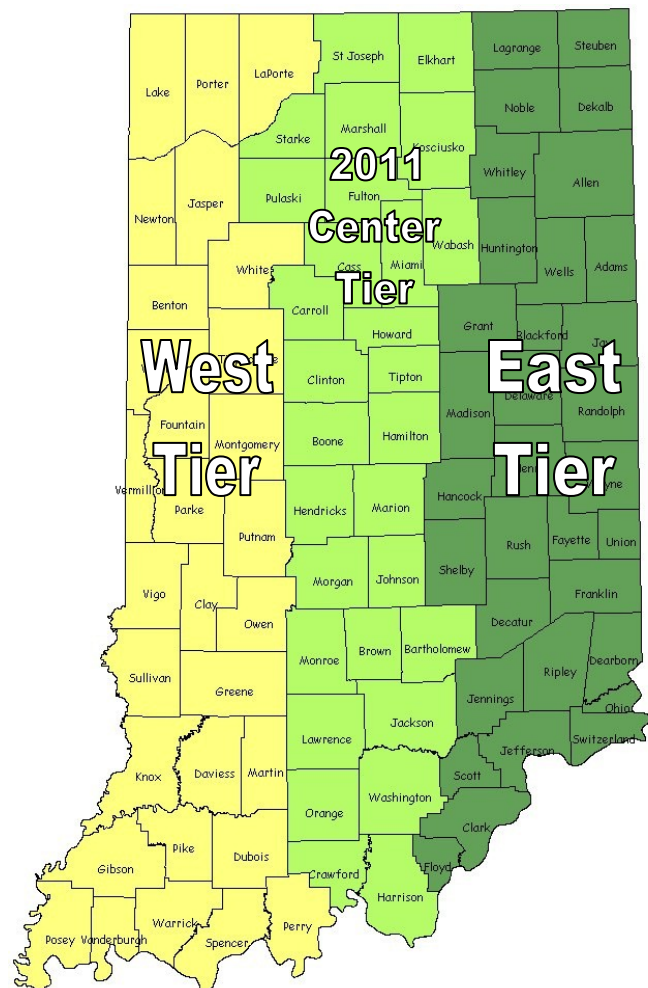
**Total ..... \$1,655,415**

Note: The project area for each tier may change due to potential optional buy-up services. The cost will be adjusted by addendum based upon optional services.

**The following optional services will be priced based upon each individual project scenario:**

- Surveying Services
- GIS Services
- Remote Sensing Services
- Photogrammetric Services
- Planimetric Mapping
- Impervious Surface Mapping
- Land Use and Land Cover
- Automated Feature Extraction
- Oblique Aerial Imagery
- Line of Site Analysis
- Utility Inventory
- 3-D Modeling
- Mobile Mapping Services

**NOTE: The Contractor will provide the State with a copy of all buy-up or optional data produced in connection with the Indiana Statewide Imagery program.**



# Optional Buy-Up Costs

## 6-inch Imagery

In Cycle with Tier ..... Additional \$96.92 per sq. mi. <sup>1</sup>  
Out of Cycle with Tier ..... Additional \$107.56 per sq. mi. <sup>1,2</sup>

<sup>1</sup>based upon countywide coverage      <sup>2</sup>Special Conditions Apply. Please contact Jim Sparks for details.

## 3-inch Imagery

In Cycle with Tier ..... \$426.00 per sq. mi. <sup>1</sup>  
Out of Cycle with Tier ..... \$436.65 per sq. mi. <sup>1,2</sup>

<sup>1</sup>based upon countywide coverage      <sup>2</sup>Special Conditions Apply. Please contact Jim Sparks for details.

## LiDAR at 1-meter average post spacing (Countywide)

In Cycle with Tier ..... Additional \$37.28 per sq. mi. <sup>1</sup>  
Out of Cycle with Tier ..... Additional \$47.92 per sq. mi. <sup>1,2</sup>

<sup>1</sup>based upon countywide coverage      <sup>2</sup>Special Conditions Apply. Please contact Jim Sparks for details.

## LiDAR at 1-meter average post spacing (20 sq. mile contiguous coverage)

In Cycle with Tier ..... Additional \$1,320.60 per sq. mi. <sup>1</sup>  
Out of Cycle with Tier ..... Additional \$1,331.25 per sq. mi. <sup>1,2</sup>

<sup>1</sup>based upon countywide coverage      <sup>2</sup>Special Conditions Apply. Please contact Jim Sparks for details.

## 2-foot Hydro-Conditioned Contours

In Cycle with Tier ..... \$372.75per sq. mi. <sup>1</sup>  
<sup>1</sup>based upon countywide coverage

## 1-foot Hydro-Conditioned Contours

In Cycle with Tier ..... \$852.00 per sq. mi. <sup>1</sup>  
<sup>1</sup>based upon countywide coverage and would require 1-meter LiDAR and 6-inch Imagery not included in this cost

12-Inch vs. 6-Inch





## **Description of Buy-UP and Additional Products**

### **Optional LiDAR**

**As an option**, additional project partners including counties, cities/towns, and others may buy-up to collect LiDAR data at an average 1-meter post spacing. Woolpert will produce the optional 1-meter LiDAR data using the above mentioned methodologies.

### **Optional Digital Orthoimagery**

**As an option**, additional project partners including counties, cities/towns, and others may buy-up to 6-inch or 3-inch pixel resolutions. Woolpert will produce the optional 6-inch orthoimagery using the above mentioned methodologies. For a 3-inch option the orthoimagery will be produced using the above mentioned methodology, except a film based solution may be used in lieu of a digital camera solution. The 6-inch imagery will be delivered using 2,500' x 2,500' tiles and the 3-inch imagery will be delivered using 1,250' X 1,250' tiles.

Accuracy will be reported and tested as per the Federal Geographic Data Committee (FGDC) Geospatial Positioning Accuracy Standards, Part 3: National Standard for Spatial Data Accuracy [NSSDA] (1998). NSSDA requires a minimum of twenty test points to perform a statistical analysis.

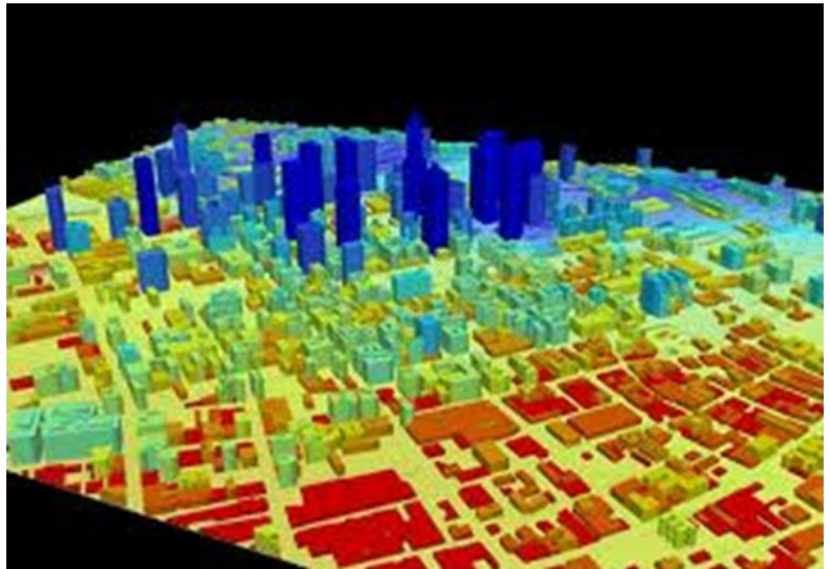
Woolpert understands IOT or its designate may be testing the orthoimagery to verify the imagery meets the NSSDA requirements. Woolpert will also be performing verification of the data by using our 20 test points per acquisition block. The following horizontal accuracy will be used.

- 12-inch pixel    +/-    5 feet or better
- 6-inch pixel     +/-    2.5 feet or better
- 3-inch pixel     +/-    1.25 feet or better

### **Standard Optional Buy-up Products**

Standard buy-up options include the following:

1. 6-inch resolution 4-band stack  
2,500' x 2,500' tiles
2. 3-inch resolution 4-band stack  
1,250' x 1,250' tiles
3. 1.0 meter LiDAR USGS v12
4. 2-foot contours including additional  
supplemental breaklines (1.5 meter LiDAR)
5. 1-foot contours including additional supplemental breaklines (1.0 meter LiDAR)



## Contours

Using the LiDAR data and orthoimagery, Woolpert will compile DTM breaklines. Some features that may be represented by DTM breaklines include: natural slope breaks, ditches, and tops and bottoms of embankments; and constructed slope breaks such as roads and graded areas. Woolpert will generate Hydro-Conditioned (USGS V12) 2-foot contours using the LiDAR derived mass points and DTM breaklines. The 2-foot contours will have an accuracy of  $\pm 1.2$  feet @ 95% confidence level (FEMA Guideline). Contours will be continuous and not be labeled, however every fifth contour (10-foot intervals) will be shown as an index contour and represented with a heavier line weight. All contours delivered in ESRI format will contain an elevation attribute that will hold the photogrammetrically obtained elevation.

For the 1-foot contour option, Woolpert will use the above mentioned methodology; however the 1-foot contours will have an accuracy of  $\pm 0.75$  feet @ 95% confidence level. 6-inch orthoimagery and 1-meter LiDAR data would be required for the 1-foot option.

The contour data will be delivered in ESRI ArcGIS compatible format in the appropriate Indiana State Plane East or West Zone.

## Enhanced Optional Buy-up Products

The following services can be provided:

- Surveying Services
- GIS Services
- Remote Sensing Services
- Photogrammetric Services
- Planimetric Mapping
- Impervious Surface Mapping
- Land Use and Land Cover
- Automated Feature Extraction
- Oblique Aerial Imagery
- Line of Site Analysis
- Utility Inventory
- 3-D Modeling
- Mobile Mapping Services



For further information:

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